B. Purpose of Testimony

I have been asked by Sprint to provide an economic and public interest analysis of SWBT's application to provide in-region long-distance service in Oklahoma. This is part of a broader project I am conducting for Sprint to develop a framework for assessing Section 271 applications generally, and to evaluate the conditions of local competition in a number of states where such applications are anticipated.

The overall framework I present here for evaluating Section 271 applications is based generally on my experience in antitrust and regulatory economics, along with my understanding of the provisions of the Telecommunications Act of 1996 (the "Act") and my experience in studying telephone markets for some fifteen years. My evaluation of the current conditions in Oklahoma is based largely on the information available in this docket from SWBT and from other interested parties, and on testimony filed in Oklahoma Corporation Commission (OCC) Cause No. PUD 970000064.[1]

II. Summary of Testimony

My testimony covers two broad areas. First, I offer a general economic framework for evaluating Section 271 applications, including SBC's application to provide in-region interLATA services in Oklahoma. My hope is that the Federal Communications Commission ("FCC" or the "Commission") will find this framework useful in evaluating this and other Section 271 applications according to the public interest standard in the Act. Second, drawing on SBC's application and the filings of other interested parties, I apply my framework to Oklahoma. In particular, I evaluate the current state of local exchange interconnection and local exchange competition in Oklahoma.

A. Economic Framework

In the general part of my analysis that presents an economic framework for assessing Section 271 applications, I conclude that interconnection agreements must be demonstrated to be

[1] Application of Ernest G. Johnson, Director of the Public Utility Division, Oklahoma Corporation Commission to Explore The Requirements of Section 271 of The Telecommunications Act of 1996.

working in practice on a commercial scale before checklist compliance can be regarded as economically meaningful, and in order to meet the public interest standard for approving Section 271 applications.

There is widespread agreement that the public interest will be served if states and the FCC take advantage of the historic opportunity provided by the Act to ensure that local telephone markets are opened up to competition. Since these markets are currently monopolized, economics tells us introducing competition into them offers potentially large social gains. To open these markets will require ongoing, extensive, and detailed cooperation from incumbent local exchange carriers (ILECs). No monopolist lightly relinquishes its dominant position. Recognizing this, Congress provided a powerful incentive for Bell Operating Company (BOC) cooperation by providing conditions necessary for BOCs to enter interLATA markets.

It would be a mistake to relinquish the Section 271 lever until local markets are demonstrably open. If Section 271 authorization is granted before we are confident that the required BOC cooperation has indeed been forthcoming and will continue, the strong incentives for BOC cooperation created by the Section 271 process will be lost, and the emergence of local competition will be undermined. This situation would be difficult to rectify, since Section 271 approval would be virtually impossible to reverse. On the other hand, if Section 271 approval is deferred until interconnection has been proven to work, such approval can then be granted quickly once local competition is reliably enabled. Thus, uncertainty favors erring on the side of caution and withholding approval until meaningful interconnection has been clearly demonstrated.

Premature approval of Section 271 applications is especially dangerous since competitive local exchange carriers (CLECs) are so reliant on BOCs to gain even a foothold in local markets, and since the required cooperation is so multifaceted and complex. Because of these complexities, regulatory oversight will necessarily be highly imperfect, especially until procedures have been ironed out and interconnection has been proven to work in practice. To approve SBC's Oklahoma Section 271 application before the highly intricate and complex interconnection relationships between SWBT and CLECs have been demonstrated to work runs the risk of prematurely eliminating the major incentive for SWBT to cooperate with its would-be rivals.

B. Oklahoma Application

Applying these principles to SBC's Oklahoma application shows clearly that approval of this application by the Commission would be premature.

First, the record shows clearly that local exchange competition in Oklahoma remains a prospect, not a reality. The Section 271 authorization process should be used to help turn that prospect into reality, not to treat the prospect as if it already were reality and thereby put the eventual emergence of competition in jeopardy.

Given the *de minimis* state of local competition in Oklahoma, in-region long-distance authorization in Oklahoma is not in the public interest absent a clear showing that entry barriers into local exchange markets relating to interconnection with SWBT truly have been eliminated. Instead, the record reveals that a large number of crucial interconnection issues remain unresolved in Oklahoma.

Detailing the specific interconnection items in dispute, and SWBT's shortcomings in providing these items, is beyond the scope of my testimony, but the record leaves no doubt in my mind that myriad important interconnection issues, both technical and economic, remain unresolved. Even with the best of intentions by SWBT, the fact remains that SWBT's economic incentives are to protect its monopoly, not to enable local competition. Withholding Section 271 authorization until interconnection has been proven to work in practice on a commercial scale is in the public interest.

I conclude that SWBT has not yet "fully implemented" the competitive checklist in any economically meaningful manner that reliably eliminates interconnection-related entry barriers to the provision of local exchange service in Oklahoma. Furthermore, since the conditions of local competition in Oklahoma are so uncertain and in such flux, uncertainty favors deferring in-region long-distance authorization for SWBT until the Commission can assert with confidence that local entry through a variety of business strategies has truly been enabled through SWBT's interconnection provisions.

Conditions are not yet right for approval. To grant SBC's request at this time would not only remove much of the pressure on SBC to truly cooperate and open up its local exchange markets, but would further send a signal to other RBOCs that they can gain in-region long-distance authority without truly opening up their local markets to competition. This would be contrary to the public interest.

III. Economic Objectives in Section 271 Applications: General Principles

There are three major economic and policy objectives that must be balanced in evaluating RBOC Section 271 applications to offer in-region long-distance service. Ultimately, determining whether in-region interLATA authorization for SBC would be consistent with the public interest, convenience, and necessity turns on the impact of authorization in these three areas. These factors are: (1) expansion of consumer choice in local markets; (2) increasing competition in interLATA markets; and (3) leveling the playing field as markets merge.

A. Opening Local Exchange Markets to Competition

My testimony focuses on the first factor, namely the impact on local exchange competition in Oklahoma of approving or denying SBC's application. The 1996 Telecommunications Act provides an historic chance to open up local exchange markets, which are the most significant remaining bottleneck monopolies in the telecommunications sector. If our experience in long-distance markets is any guide, the introduction of competition into local exchange markets will generate substantial consumer benefits in the form of new services and lower prices, once a variety of thorny interconnection issues are worked out.

Introducing competition into local exchange services will require the cooperation of the incumbent local exchange carriers (ILECs). This cooperation is unlikely to be voluntary; no monopolist, regulated or not, is keen to relinquish its dominant position. Furthermore, direct regulation of SBC's conduct in and of itself is a highly imperfect means of ensuring viable local competition — there is too much scope for SBC to get around the spirit if not the letter of the interconnection rules, and to impose its own interpretation of its interconnection duties, at least until many aspects of interconnection are tested in practice and understood by competitive local exchange carriers and regulators alike.

So long as Section 271 authorization remains pending, SBC has incentives to fix posthaste problems with CLECs; once Section 271 authorization is granted, SBC will have fewer incentives quickly to resolve disputes over the myriad details of interconnection, although CLECs will remain heavily dependent upon SBC. This highly asymmetric situation would not be conducive to resolving the many interconnection issues that are vital to making local exchange competition a reality.

The implication of this analysis is that the path to genuine local competition will be far smoother if SBC, and the other BOCs, are given incentives to partially offset their natural economic incentives to protect their monopoly positions and to cooperate in making local competition truly possible. By insisting, as a condition for entry into in-region interexchange service, that SBC demonstrate that it has put in place the conditions necessary for local competition to flourish, in practice and not just on paper, the Section 271 process can be used to induce cooperation. This *quid pro quo* is central to the development of local exchange competition.

B. Impact on Competition in Long-Distance Markets

Long-distance entry by SBC is not just a reward for providing meaningful interconnection with local rivals; it has direct implications for long-distance markets. If SBC can be prevented from misusing its bottleneck local monopoly to disadvantage its long-distance rivals, then permitting SBC to enter the long-distance market will render that market more competitive. One reason to insist that local competition has truly been enabled before granting Section 271 authorization is to reduce the dangers of such misuse.

In any overall balancing of impacts on local and long-distance markets, it is important to remember that the U.S. long-distance marketplace is currently far more competitive than are local exchange markets served by SBC. On this basis, the incremental benefits of entry into long distance are very likely to be smaller than the corresponding benefits from entry into the local exchange. This is especially so given that local access serves as an input into the provision of long-distance service; the benefits from increased competition and possible technological innovations in local exchange services can be expected to flow through, in part, to long-distance markets.

Three considerations limit any benefits to consumers in long-distance markets from SBC's entry into those markets. First, there is the danger that SBC will use its bottleneck local monopoly to reduce competition in long-distance. Second, the benefits from adding another competitor to the long-distance market are muted in comparison with adding a competitor to a monopolized market. Third, to the extent that SBC will be a reseller of long-distance services rather than a facilities-based competitor, its impact on long-distance markets is less pronounced.

I have reviewed the testimony put forward by Mr. Raimondi of WEFA regarding the predicted benefits to Oklahoma consumers of granting SBC's application. As with any forecasting model, the results are no better than the assumptions going into the model. Mr. Raimondi simply *assumes* that long-distance service prices fall 25% below the baseline forecast by 2001 due to SBC's entry into long-distance markets, that SBC's entry will cause productivity gains and quality improvements of 2% per year, and that it would increase the labor force participation rate by 0.5% over the next ten years. Obviously, these types of changes would be beneficial to consumers and the State of Oklahoma generally. The key question that the OCC, and the Federal Communications Commission, will have to address is whether *immediate* approval is better than waiting until SBC has done more to enable local exchange competition. Even assuming that the Commission concludes that SBC's entry into long-distance markets will generate some benefits, those benefits must be balanced against the harms caused by a reduction in competition in local exchange (and access) markets. Mr. Raimondi's analysis is at best incomplete in failing to address this key tradeoff.

In fact, I suspect that Mr. Raimondi's own model could easily be used to strengthen my conclusions: if SBC is not compelled to truly open its local exchange markets to competition, the Oklahoma economy could suffer substantial harm. Furthermore, mistaken approval of a Section 271 application by SBC could delay local competition for years to come, while denial of a properly supported application will delay the benefits Mr. Raimondi anticipates by only a matter of months, until another application can be filed and approved.

Mr. Raimondi also appears to not consider that regulation, if ineffective, could fail to prevent discrimination against rival interexchange carriers and thus lead to consumer harm in interexchange markets. Discrimination is especially harmful to consumer welfare and the public interest because it lowers the quality of service that interexchange rivals can provide to their customers, with little or no offsetting cost savings. Economists widely agree that such quality degradation tends to be even more harmful to the public interest than conventional monopoly overcharges with their associated deadweight losses.

Of course, state regulatory commissions like the OCC will attempt to prevent discrimination they can detect, and Congress has provided certain safeguards, including the structural safeguards in Section 272 of the Act, to reduce the dangers of discrimination. However, such regulations are necessarily imperfect, no matter how energetic and forward looking the regulators, so the prospect of discrimination cannot be discounted.

The ongoing danger of discrimination has three implications: (1) the Commission should factor in this danger in evaluating the net benefit or harm to consumers in long-distance markets of SBC's entry into those markets; (2) if and when SBC is granted Section 271 authority to provide in-region long-distance service, the Commission and the OCC will have to be vigilant to prevent discrimination, act swiftly in response to complaints about discrimination, and respond forcefully when they detect discrimination; and (3) since the danger of discrimination diminishes as CLECs gain greater presence in local markets, protecting competition in long-distance markets provides yet another reason for the Commission to insist that local competition truly be enabled before approving any Section 271 application of SBC.

Similarly, to the extent that regulation is unable to prevent cross-subsidization of long-distance customers by local exchange customers, BOC entry into long-distance markets will actually harm local exchange customers, who will be forced to subsidize long-distance calling. Such cross-subsidies, in addition to distorting competition in interexchange markets, amount to regulatory evasion and are contrary to the public interest.

C. Bundling Parity

There appears to be industry consensus that many consumers will value the ability to purchase a wide range of services - such as local, long-distance, and wireless - from a single vendor. There seems little doubt that many industry participants are planning to market bundles of services. I anticipate that the marketing of bundles of telecommunications services to high-volume users will be especially intense.

As we look ahead to widespread competition and converging markets, firms that are unable to offer key pieces of attractive bundles will be at a competitive disadvantage. Therefore, parity in the ability to bundle services will be important to full competition in the future.

Other things equal, the public interest militates against giving one firm or a group of firms a significant head start in offering bundled services, especially if those firms can rapidly gain market share by marketing the bundled services. The recent experiences of Southern New England Telecommunications Corporation (SNET) and GTE demonstrate that entry into interLATA markets by ILECs can be achieved swiftly.[2] In contrast, significant competition in local exchange markets remains unproven, in Oklahoma and elsewhere. This view is supported in the testimony of Kahn and Tardiff, who state that "...whereas the rules for entry by competitors into the local exchange market are still in the process of being hammered out, the arrangements for fair access by the long-distance carriers to the facilities of the BOCs have been in place <u>for upwards of a decade</u>." (emphasis in original) (page 27).

My public interest analysis is consistent with the public interest objective of promoting bundling parity. If the Commission concludes that SBC can rapidly and reliably enter in-region long-distance markets once authorized to do so, and if the Commission concludes that there is far greater uncertainty about the ability of CLECs to effectively offer local service, at least until a myriad of details involving interconnection are resolved, the goal of a "level playing field" as markets converge mandates denying in-region authorization until local competition has truly been enabled, and then promptly granting such authorization (assuming the other conditions of the Act are also met by the application).

The public interest goal of bundling parity provides one reason to defer granting Section 271 approval until access charges have been reformed. So long as access charges remain well above incremental costs, SBC will have a significant artificial cost advantage over other interexchange carriers in serving incremental interexchange business. In seeking business that adds to total long-distance calling, SBC will account for the true incremental cost of providing access for an additional minute of long-distance calling. In contrast, all other carriers seeking that same business must include in their costs the higher access charges they owe to SBC when they provide

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[2] At SNET's annual meeting in May 1996, SNET's Chairman and CEO Daniel Miglio cited the phenomenal growth in SNET's interstate long-distance market share, stating, "In two short years, we have built a new $80 million revenue stream with a lot of opportunity to grow." During this period, SNET enjoyed ten consecutive quarters of earnings growth and a steadily rising stock price. Merrill Lynch has reported that SNET's long-distance subsidiary, SNET America, captured 25% of SNET's local customers within two years of entry, despite aggressive competition from AT&T. Along similar lines, it has been reported recently that "Since the spring, [GTE] has turned more than [one] million of its local customers into long-distance clients, siphoning business from AT&T and MCI, and it is signing up new customers at the rate of more than 6,000 per day, says Chairman Charles R. Lee." (Wall St. J. Nov. 5, 1996; Communications Today, April 16, 1997).

an additional long-distance minute. This logic is not altered by structural separation and imputation requirements.

D. Uncertainty Favors Delay

In balancing the three economic objectives I described earlier, it is important to remember that uncertainty favors deferring Section 271 authority until we can be confident that local competition has truly been enabled.

Once approval has been granted, it will be nearly impossible to rescind as a practical matter. On the other hand, if approval is denied, the BOC can put in another application as soon as conditions have changed to warrant approval knowing it will receive a response within 90 days. The Commission should *not* regard its decision in response to Section 271 applications such as SBC's current application in Oklahoma as a once-and-for-all choice of whether to authorize SBC to provide in-region long-distance services. Rather, the Commission should ask whether the public interest is better served by delaying approval until additional conditions are met.

IV. Local Exchange Competition: General Principles

I turn now to apply the economic and public interest framework described above to SBC's Oklahoma application, focusing largely on my first factor - the goal of opening local exchange markets to competition.

The key question in my analysis is this: Has SBC taken the necessary steps to enable genuine local exchange competition to flourish? If not, approval of SBC's application will predictably and adversely affect progress towards true local exchange competition, contrary to the public interest.

In assessing current and prospective local exchange competition, two distinctions are crucial. First, one must distinguish *actual* competition from *potential* competition. Second, one must distinguish CLECs based on their entry strategies and based on their assets: facilities-based competition is qualitatively different from competition based on leased elements, which in turn differs from pure resale competition. Applying this tripartite division is complicated by the fact that given CLECs can and will adopt different approaches in providing services to local exchange customers, both across geographic regions and across time.

A. Actual vs. Potential Competition

By far the strongest proof of the feasibility of local exchange competition is the actual presence of significant facilities-based local competitors, *i.e.*, actual competition over independent facilities. The more widespread is local competition, the more it takes place over facilities outside the control of the ILEC, and the greater the number of actual CLECs, the more confident we can be that conditions are truly conducive to entry and expansion by CLECs.

Actual competition can in principle be measured through market shares, capacity levels, and the like. Having said this, I am keenly aware that the Act does not require any minimum market share for CLECs before in-region authorization can be granted. Indeed, to do so would mute the Bell Company's incentives to compete aggressively to retain market share in the face of new entry.

In the light of this fact, and given the severely limited state of actual local competition in Oklahoma today, my analysis necessarily focuses on the prospects for genuine local competition in the near future. In significant part, this involves an assessment of the remaining entry barriers into local exchange markets in Oklahoma, and the extent to which SBC can affect the height of the remaining barriers. In economic terms, I ask whether the barriers to entry into local markets in Oklahoma, or at least those barriers associated with interconnection with SBC, have truly been substantially eliminated. I find that they have not.

B. The Importance of Facilities-Based Competition

Whether looking at actual or potential competition in local exchange markets, facilities-based competition is especially important. CLECs with their own facilities have made substantial sunk investments to serve the market, and are thus committed to an ongoing market presence. Facilities-based competition also is superior to resale competition because it represents far greater competitor independence of the ILEC. Ultimately, for regulation to wither away and give way to competition will require the presence of strong, facilities-based competitors to SBC. Investments in alternative local loop facilities would be especially significant, as these facilities represent a lasting commitment to the local market. Congress expected these investments would be made, and repeatedly gave the example of cable facilities.

Facilities-based competitors also represent alternative sources of access services. Resellers do not serve this function. Widespread competition in the provision of access will help ensure that interexchange markets remain competitive after BOC entry.

Competition based on the leasing of network elements is not nearly as significant as true facilities-based competition. A CLEC who is leasing elements from the incumbent local exchange carrier clearly remains heavily reliant on the incumbent carrier. Additionally, the necessary sunk investments, and thus the CLEC's commitment to the market associated with leasing network elements, are far lower than those required of a CLEC building its own loop plant.

Nevertheless, leased elements are preferable to resale in terms of offering competition to the ILEC. First, CLECs who are leasing network elements can offer competition along a number of dimensions that resellers cannot. Second, resale rates are not based on the underlying costs of the facilities, so resale competition does relatively little to drive retail rates down towards cost.

I would hope that all parties can agree that resale, while offering valuable competition over some aspects of service (such as marketing, billing, or customer service), is inherently limited and less meaningful than the provision of service through the leasing of unbundled network elements. Professors Harris and Teece, in their affidavit on behalf of Ameritech Michigan, appear to agree with this, stating that leased unbundled elements "are clearly distinct from resale of services over the incumbent's facilities" for the purposes of competitive assessment.[3] Nonetheless, competition through the use of unbundled network elements is not a substitute for facilities-based competition.

For the purposes of competitive assessment, a key issue is whether one firm is dependent upon its *competitors* for key inputs. Clearly, CLECs who are leasing elements from SBC remain heavily dependent upon SBC to provide service, contractual and regulatory protections notwithstanding. The Justice Department routinely recognizes in merger analysis that firms dependent upon their rivals for key inputs, *e.g.*, through a supply agreement designed to fix an anticompetitive problem associated with an acquisition, typically are not as strong a competitive force as those who are truly independent. Competition from firms who rely upon a rival for a key input, and whose basic ability to offer services is dependent upon contractual rights imposed

[3] Affidavit of Harris and Teece (In the matter of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region InterLATA Service in Michigan), at p. 12, footnote 16.

unwillingly on a direct rival, are generally not "economically equivalent" to fully independent rivals.

V. Current Local Competition in Oklahoma is *De Minimis*

As I recognized above, significant actual local competition would be the most convincing demonstration that local markets are indeed open. Such competition has not yet arrived, and I fear it will be delayed by premature Section 271 approval.

By conventional market share measures, SWBT maintains a dominant monopoly position in the provision of local exchange service in Oklahoma. Although SWBT does not appear to dispute this statement, it is easy to lose sight of this simple fact. SWBT's experts devote attention to competitors' installed fiber facilities, most notably Brooks Fiber Communications' presence in Tulsa and Oklahoma City, but these discussions focus on the percentage of SWBT business and residential lines which are within a defined proximity of customers. (Montgomery Aff. at ¶¶8-9, 12-13). Conspicuously absent is any mention of how many customers have been signed up. Only in SWBT's brief do we find a reference to Brooks Fiber's 20 business customers, eight of which are being served "via direct on-net connections," over Brooks' switched fiber networks. (Initial Comments of Brooks Fiber in Cause No. PUD 970000064 at p. 2). At present, four residential customers, all of them Brooks employees, are being served exclusively on a resale basis. (Id.; Statement of Steven E. Turner at p. 4). Such limited penetration does not represent convincing evidence that the local exchange is open to competition.

The two CLECs in Oklahoma that Messrs. Montgomery and Wheeler characterize as "facilities-based," Brooks Fiber and American Communications Services, Inc. (ACSI), collectively and individually serve a very limited geographic region within Oklahoma. According to Wheeler, Brooks Fiber has 200 miles of fiber in the Tulsa area, and 50 miles in Oklahoma City, with one Lucent 5E switch in each locale. (Wheeler Aff. at ¶¶7 and 14). ACSI has built a 3 mile network around downtown Tulsa. (Id. at ¶17). Although these facilities should not be ignored, they do not comprise a level of sunk investment that establishes the presence of meaningful competitive entry.

VI. Assessing Potential Local Competition in Oklahoma

SBC's application relies heavily on the proposition that local exchange markets in Oklahoma are currently open to competition, irrespective of the minimal actual competition observed. SBC states that "...the local exchange market in Oklahoma has been opened and competition has an opportunity to flourish." (SBC Brief, pp. i-ii).

I simply do not find support for this statement in the Oklahoma record. Certainly, progress is being made in Oklahoma toward the eventual opening up of local markets. SWBT's sixteen negotiated interconnection and resale agreements, of which six have gained OCC approval, are a step in the right direction. However, especially in a marketplace with virtually no actual competition, listing potential entrants' hopes, wishes, and plans, and pointing out that entry barriers are not as high as they used to be, is a far cry from directly assessing the significance of the remaining entry barriers and finding that they are low. I am concerned that granting SBC in-region long-distance authorization prematurely will slow down the process of dismantling those entry barriers.

In this section I discuss the economic principles by which potential competition in local exchange markets can be assessed, evaluate whether local competition in Oklahoma is yet imminent, and identify remaining entry barriers that will be lowered only through SBC's ongoing cooperation.

A. General Principles: Is Competition Enabled?

I recognize that, at some point, the competitive checklist may be fully implemented in Oklahoma, and interconnection-related entry barriers in local markets in Oklahoma may be largely eliminated, even if full competition in local exchange markets has not yet arrived. I recognize as well that full competition is not the applicable legal standard for a Section 271 application. However, from a public interest perspective, in order to be confident that local markets are indeed open, we must see some actual competitors with their own facilities, we must see a variety of interconnection arrangements working on a commercial scale, we must be convinced that additional entry is imminent, and we must be confident that the incumbent LEC cannot prevent these entrants from competing effectively. Given the competitive pressure in the industry to offer broader bundles of telecommunications services to customers, a lack of significant entry into local exchange markets, *e.g.*, by major interexchange carriers, suggests strongly that the terms and conditions of interconnection are not yet conducive to that entry.

One important indicator of imminent competition in local exchange markets is the expenditure of significant non-recoverable (sunk) investments by CLECs. Such investments constitute a vote of confidence that competition is feasible, by those with a direct financial stake in making competition a reality. For precisely this reason, mere announcements of plans to offer services are far less reliable than actual sunk expenditures. Yet the SBC witnesses appear to place considerable weight on such announcements in asserting that competition is imminent.

Having acknowledged the economic importance of sunk investments, I must emphasize that the presence of some sunk investments by some carriers does not itself suffice to demonstrate that local markets have been opened to competition, or that these investments will lead to significant competition, for two reasons.

First, it would be contrary to the public interest for these investments to be stranded or devalued by problems implementing interconnection with SBC. Any sunk investments that have been made will remain at risk until it has been proven that the entrants can indeed rely on SBC to provide critical inputs in a non-discriminatory manner. Such problems are less likely to arise if SBC is permitted to enter long-distance markets only after the required aspects of interconnection have been proven to work in practice on a commercial scale. By deferring Section 271 authorization until SBC has demonstrated its cooperation, local competition is enhanced, entrants' investments are partially protected from exclusionary tactics by SBC, and further investments by CLECs are encouraged.

Second, not all sunk expenditures to provide local telephone services are specific to those services. Investments in facilities that also jointly provide access services and exchange services are less meaningful in inferring that entry barriers into local exchange markets have been lowered than investments in fully specific assets. In other words, when evaluating the significance of sunk investments for assessing market participants' beliefs about the feasibility of local exchange competition, it is important to account for the entire range of services provided by those investments. Due to the presence of economies of scope in the provision of access and exchange services, some investments in local facilities may be recoverable through provision of access services, and not reliant on the full range of interconnection necessary to a CLEC. Indeed, much of the investment in downtown fiber networks, in Oklahoma and nationally, has been undertaken to provide access services, not exchange services.

In local exchange markets, barriers to growth may be at least as important as barriers to entry. By "barriers to growth," sometimes referred to in the literature as "barriers to mobility," I mean market conditions that impede the ability of market participants to compete effectively and add new customers or services. After all, even if a firm has made some investments in the local exchange market and entered that market, its ability to compete and attract customers may still be limited by SBC's conduct, *e.g.*, if SBC provides the firm with inferior repair and maintenance services or if SBC has limited ability to process new orders or to provide billing information.

Due to the complexity and importance of interconnecting in various ways with the ILEC, we cannot be confident that entry truly has been enabled, and thus a would-be CLEC faces additional risk, until interconnection has been shown to work on a commercial scale, encompassing a range of interconnection issues that are meaningful to CLECs with diverse entry strategies. In demonstrating that interconnection in its myriad details really works, an interconnection agreement with a CLEC covering a large geographic area is more convincing and more meaningful than an agreement with a highly localized CLEC.

In order for entry to be feasible, and for CLECs to be willing to make the additional necessary investments to provide genuine competition, potential entrants need to be confident that workable systems are in place on a commercially viable scale. Thus, checklist compliance has to mean more than having something on paper. To be economically meaningful, the details must be worked out in practice and agreements must be fully implemented. There are a great many details that really matter for the commercial viability of CLECs. For many of the terms of interconnection, the interests of SBC and CLECs are directly opposed. All of this implies that it is highly desirable to provide SBC with ongoing incentives to cooperate, in the form of withholding the long-distance entry "prize," until such cooperation has been definitely elicited and shown to truly enable entry.

Interconnection arrangements that are ambiguous, inadequate, or incomplete for CLECs' needs will hinder local competition. Absent reliable, working interconnection arrangements, CLECs will be wary of making the substantial sunk investments necessary to participate fully in local markets, and the investments CLECs do make will remain at risk. This is certainly true for facilities investments, which are largely non-recoverable in the event that interconnection problems arise, and thus will depreciate in value if the terms or conditions of interconnection fail to achieve operational parity between CLECs and the ILEC.

B. Entry Barriers into Local Exchange Markets in Oklahoma

1. Evidence of Sunk Investments

Investments that are sunk and specific to the provision of local exchange service provide some indication of future competition. How significant are such investments in Oklahoma? Certainly there are some investments in Oklahoma that fall into this category, such as the switches that have been installed by Brooks Fiber. This is a start, but hardly an indication that widespread or significant competition is imminent.

2. Risks Associated with Local Entry Generally

Until CLECs can be confident that they will obtain interconnection on commercially acceptable terms that will allow them to achieve operational parity with SBC, entrants surely attribute considerable interconnection risk to any sunk investments they might contemplate. This "risk premium" can serve only to delay or deter entry and the advent of competition. This is especially true for a company like Sprint, with a valuable brand name that could be put at risk if service quality is degraded due to interconnection problems. I would expect Sprint and others to be extremely wary of offering service, and undertaking the concomitant marketing rollout expenses, under their brand names unless and until they can ensure service quality - from the pre-ordering of services to the provisioning of repair - on par with SBC. To do otherwise would put their brand names at risk in Oklahoma, and potentially place them at a major disadvantage for years to come in selling bundles of services in competition with SBC. If Sprint's brand name is tarnished as a result of premature entry into local service, its accumulated goodwill in long-distance could likewise be jeopardized. As noted below, for a number of aspects of interconnection, it is currently impossible for CLECs to ensure that they are receiving competitive and operating parity with SBC itself.

3. Unresolved Interconnection Issues in Oklahoma

It is imperative that interconnection issues be resolved before concluding that competition is enabled; when it comes to interconnection, the devil truly is in the details. The myriad aspects of interconnection cannot be left for later, because they are so crucial to CLECs' abilities to compete effectively. Many aspects of interconnection that remain unresolved have significant implications for either CLECs' costs or the quality of their service, and thus for the attractiveness of entry into local markets.

If CLECs were providing services on a commercial scale in a variety of settings in Oklahoma, we could be confident that interconnection was working (although the need for ongoing regulation will not soon end). In fact, however, CLECs collectively serve a mere handful of access lines in Oklahoma, and the interconnection agreements already negotiated, and in Brooks' case put into operation, are not deemed by the CLECs as satisfactorily addressing all the relevant competitive issues.

Under these circumstances, and given the attractiveness of the Oklahoma marketplace to a number of carriers, including the larger interexchange carriers, I believe there should be a presumption that the terms and conditions of interconnection either (a) fail to provide parity between SWBT and CLECs, or (b) simply have not been available long enough to be tested and used by CLECs. In the former case, which I believe currently applies in Oklahoma, interconnection is either not yet fully implemented or is discriminatory, and Section 271 approval is inappropriate. In the latter case, there would still be a strong argument for waiting until interconnection has been proven to work before granting SBC in-region long-distance authority.

Even if the Commission were to observe a single, fully implemented interconnection agreement, there should be no presumption that entry barriers have been eliminated or that all checklist items have been met. To begin with, the agreement may not be suitable for other CLECs adopting different strategies. Furthermore, a single agreement may demonstrate that competition can occur for certain customers, or in certain geographic areas, but not others.

When significant aspects of interconnection remain unresolved, CLECs' abilities to compete remain significantly under the control of the BOC. If further cooperation from the BOC is needed to make actual or potential local exchange competition economically meaningful, approval of the BOC's Section 271 application is premature and will diminish consumer welfare.

Nor can the Commission, or the OCC, simply compel SBC to meet reasonable interconnection terms in the future. Regulation is inevitably highly imperfect, and entrants will be reluctant to rely on future, uncertain regulatory protections when making substantial sunk investments. There is much to be said for "stress testing" interconnection terms and conditions in practice before concluding that an interconnection agreement can work in practice and that interconnection is "fully implemented."

Specific aspects of interconnection remain to be fully implemented in Oklahoma. Materials I reviewed are replete with references to unresolved interconnection issues, the interim nature of various current arrangements, and limitations on the ability of CLECs to compete effectively. To some extent this is inevitable; these are highly complex arrangements that are only now beginning to be worked out between SWBT and CLECs. But that is precisely the point. There is great value in giving incentives to SWBT, the incumbent monopolist, to cooperate to resolve these disputes and clarify remaining ambiguities.

Without intending to offer an exhaustive or necessarily representative list of outstanding interconnection issues, I list a number of them here to illustrate that they are both unresolved and truly critical for CLECs to enter and grow.

- Brooks and SBC have not yet implemented physical collocation at various SWBT central offices. This is a prerequisite for Brooks' ability to gain access to and utilize leased, unbundled loop facilities.

- Brooks has experienced problems with SWBT's implementation of interim number portability. According to Brooks, the company has experienced difficulties with every one of its customer conversions.

- There has been no determination by the OCC that SWBT's rates for interconnection in either its agreement with Brooks or its Statement of Generally Available Terms are set based upon the BOC's forward looking economic cost of providing various elements and services.

- Cox Communications reports difficulties in securing NXX codes from SWBT.

- AT&T witnesses detail a number of checklist issues which AT&T and SWBT have not yet resolved, including access to unbundled network elements (UNEs), the operations support systems (OSSs) required to support UNEs, cost-based pricing of UNEs, provisioning of OSS, electronic interfaces, and gateways, number administration, number portability, local dialing parity, and toll dialing parity.

In listing these outstanding interconnection issues, I have not assumed that every criticism of SWBT's interconnection arrangements and negotiations is meritorious. My point is simply that interconnection in Oklahoma is currently in a tremendous state of flux, and that CLECs remain heavily reliant on SWBT for key inputs.

My review of Sprint's filings in this proceeding confirm that a number of specific checklist items critical to Sprint's entry plans have yet to be proven to work commercially in Oklahoma. In particular, I understand that real-time access to SWBT information, which is required for the processing of orders for new service, is yet unproven, and that Sprint is not willing to make significant investments until it is confident that customers placing orders will not experience undue delays. (Phelan OCC Aff. at pp. 29-30).

Sprint is likewise concerned about how electronic interfaces between itself and SWBT will operate to provide Sprint with reasonable, timely and economical access to operations systems, customer records, and billing data. Such concerns appear legitimate given that Sprint has experienced some difficulties and delays in tests of billing for local service in other states. (Id. at p. 30).

More generally, Sprint's witnesses argue that the steps necessary to migrate from contractual agreement to operational readiness are many and complex. (Meyer OCC Aff. at p. 6). Ms. Meyer argues that the OSS interfaces required by Sprint and other CLECs, specifically EDI and electronic bonding, are not operationally available today from SWBT. (Id. at p. 9). Ms. Meyer goes on to testify that "...there is no area of OSS interface functionality that meets Sprint's requirements for operational parity and in fact, the most optimistic date that operational parity with SWBT can be attained is probably late 1998." (Id. at p. 14).

SWBT's provisioning of UNEs is likewise in flux. According to Sprint, any planning it might undertake to employ UNEs is rendered nearly impossible since the complete list of elements required to provision the services and their associated costs are unknown. (Id. at p. 18). What's more, SWBT will make no commitment on whether Sprint will have access to purchase any of SWBT's pending product offerings or unbundled network enhancements that they plan on introducing in the near-term or long-term, including Advanced Intelligent Network (AIN), Asymmetric Digital Subscriber Lines (ADSL), and ADSL modems. (Id. at pp. 18-19).

These examples are not meant to cover all of Sprint's concerns in Oklahoma, and I do not claim familiarity with the details of Sprint's planned local operations in Oklahoma or its negotiations with SWBT. However, they illustrate a variety of important "details" that must be worked out in practice before Sprint can successfully offer local exchange services.

I declare under penalty of perjury, under the laws of the United States of America, that the foregoing is true and correct to the best of my knowledge, information, and belief.

Executed on the 30th day of April, 1997 in Oakland, California

Carl Shapiro

Carl Shapiro

ATTACHMENT C

FLAWS IN THE PUBLIC INTEREST ANALYSIS OF SBLD INTERLATA ENTRY

Marybeth M. Banks
Director, Federal Regulatory Affairs
Sprint Communications Company L.P.

Submitted to the
Federal Communications Commission
CC Docket No. 97-121
May 1, 1997

FLAWS IN THE PUBLIC INTEREST ANALYSIS OF SBLD INTERLATA ENTRY

Marybeth M. Banks
Director, Federal Regulatory Affairs
Sprint Communications Company L.P.

I. INTRODUCTION.

To support its argument that its entry into the long distance market would be beneficial to consumers, SBC has submitted affidavits by Alfred Kahn and Timothy Tardiff, Richard Schmalensee and WEFA, among others, and has relied upon a recent book by Paul W. MacAvoy.[1] Contrary to SBC's advertising campaign in its service areas -- which asserts that local competition is rampant but that there is no long distance competition -- and to the conclusions reached by the affiants and MacAvoy, competition in the long distance market is robust. Any assumption that consumers have not particularly benefited from the existing competition in the long distance market is simply counterintuitive. The deconcentration trend that has characterized the long distance market and that continues today strongly suggests a competitively performing market. Advertisements for long distance service informing consumers of their options seem to have reached an all time high, providing further confirmation. In addition to the continuing advertising campaigns of the major nationwide interexchange carriers, the rapid and dramatic growth of a fourth national carrier, and the success of "dial-around providers" that have recently flooded the mass market, there are also the successful efforts

[1] The Failure of Antitrust and Regulation to Establish Competition in Long-Distance Telephone Services, 1996.

of small, regional-based carriers, all seeking to "woo" customers away from one another based on offers of substantial discounts.[2]

This common sense reality creates a substantial burden for those seeking to rewrite it. In order for their conclusions to be credible, the affiants must be solid on their facts,[3] and they must have a rational basis for their presumptions about future behavior. Their conclusions that a new entrant will bring down long distance prices are based on incomplete information about the myriad of competitive products currently available to residential and business customers and on incorrect assumptions about the cost of

[2] "Coy Telecom Giant Woos AT&T Customers," The Wall Street Journal, April 15, 1997, p. B1.

[3] On many details in their affidavit, Messrs. Kahn and Tardiff simply have their facts wrong. For example, at ¶62, where they describe Sprint's commitment to entering the local market, every single statement made about Sprint's local entry activities is incorrect. They state first that "Sprint has major cellular holdings... ." In fact, Sprint spun off those holdings into an entirely separate corporation, 360° Communications, more than a year ago. Next, they state that Sprint "has joined with cable companies in a number of areas to offer basic telephone service, as well, of course, as the more remunerative local exchange services that go with it." Aside from their unexplained distinction between "basic telephone service" and "local exchange services," they also misunderstand the nature of Sprint's partnership with cable companies. That partnership – Sprint Spectrum LP – is engaged solely in the provision of wireless PCS services. Although the partners originally intended that the joint venture would also offer wireline local services through upgraded cable plant, that plan has long since been abandoned. Finally, Kahn and Tardiff assert: "Furthermore, in the most recent PCS auction, Sprint, once again in alliance with major CATV companies, was awarded large blocks of radio spectrum, which they apparently intend to use to offer basic local exchange as well as innovative services." Again, they are wrong on their facts. In the most recent PCS auction (the auction for the D, E and F blocks), it was Sprint Corporation itself (through a wholly-owned subsidiary Sprint Com Inc.) – not the Sprint Spectrum partnership with the cable companies that successfully bid on PCS spectrum in the earlier A and B block auction. Although their characterizations of Sprint's efforts to enter the local market may not go to the heart of their contentions in their affidavit, their failure to get their facts straight about Sprint is clearly cause for concern that the factual underpinning for their views on the public interest effects of SBC's entry may be similarly flawed as well.

providing long distance service. Their evaluation of the public interest benefits is based on biased data which produce inflated forecasts of new jobs and Gross State Product. Their errors and omissions are discussed below.

II. COMPETITION IN THE LONG DISTANCE MARKET IS ROBUST.

A. Competitors' Market Shares and New Products Evidence the Competitiveness of the Market.

The long distance market is now characterized by hundreds of interexchange carriers and resellers, 390 of which filed 1995 TRS Fund Worksheets with revenues of approximately $75 billion.[4] Based on FCC data, AT&T's market share is currently approximately 52 percent and is eroding at approximately one percent per quarter.[5] This rate of erosion is the greatest AT&T has experienced since 1986 when equal access was being implemented.[6] Despite readily observable attempts to stem the erosion with new competitive products such as One Rate and One Rate Plus, winback promotions and promotions available only to customers that confirm that they have been approached by

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[4] Telecommunications Industry Revenue: TRS Fund Worksheet Data, December 1996, Tables 1, 6 and 7.

[5] "Long Distance Market Shares, Fourth Quarter 1996," Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, March 1997, Table 3. AT&T's share of interstate minutes for the last four quarters:

1995 Fourth Quarter	55.9%
1996 First Quarter	54.8%
1996 Second Quarter	53.7%
1996 Third Quarter	52.8%
1996 Fourth Quarter	52.1%

[6] *Id.* In 1987 AT&T's share dropped by 3.6 percentage points; in 1988, 3.2; in 1989, 3.3; in 1990, 0.9; in 1991, 0.9; in 1992, 2.4; in 1993, 0.4; in 1994, 1.2; and in 1995, 2.2.